Attorney's Docket: 020431.0968
Using Connectors to Automatically Update
Graphical User Interface Elements at a Client
System According to an Updated State of a
Configuration
By: Samu J. Lahti, et al.
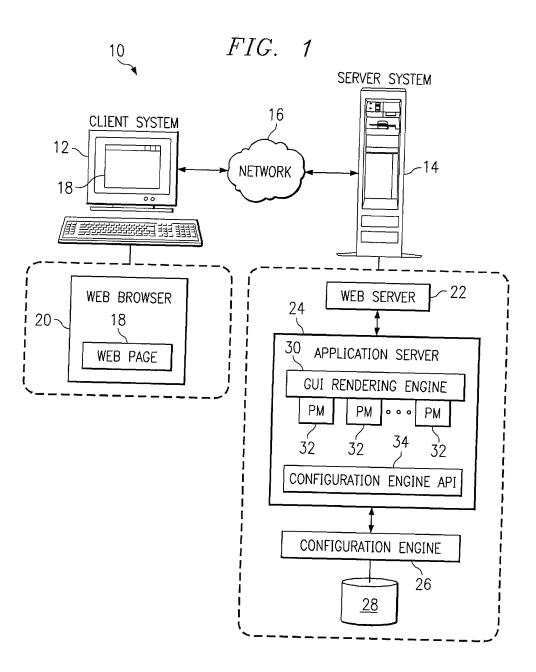Dated Filed: February 28, 2002

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FIG. 1

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AUTOMOBILE

COUPE BODY STYLE ← 42

44a
(OR)

44a
(OR)

REGULAR TRIM LINE ← 42

40

LEATHER

SUNROOF

44b
(AND)

MANUAL ← 42

○
○
○

ALLOY

42 SPORT TRIM LINE ← 42

PREMIUM TRIM LINE

SEDAN BODY STYLE

46a   46b   46c

FIG. 2

52a — BODY STYLE

OPTIONS — 52a

52b — ⦿ COUPE

52d — ☑ LEATHER

○ SEDAN

☐ SUNROOF

52a — TRIM LINE

☑ MANUAL

○
○
○

52c — REGULAR ▼

☐ ALLOY

CONFIGURATION DIALOG FRAME

18

54   50

CONFIGURATION
API FRAME

56

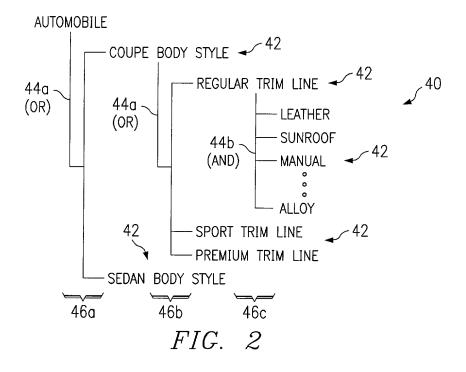CONFIGURATION
DATA FRAME

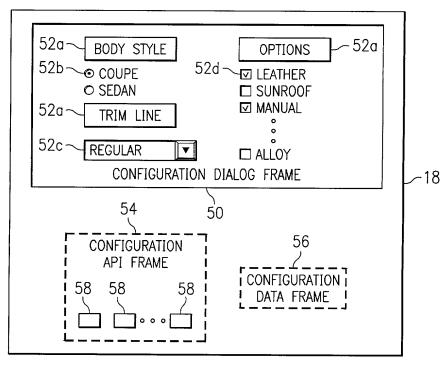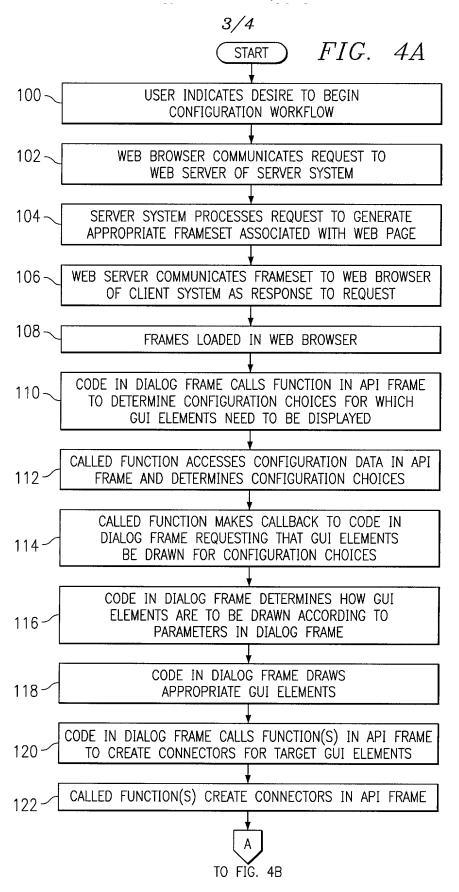58 58   58

☐ ☐ ○ ○ ○ ☐

FIG. 3

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START   *FIG. 4A*

100 — USER INDICATES DESIRE TO BEGIN
CONFIGURATION WORKFLOW

102 — WEB BROWSER COMMUNICATES REQUEST TO
WEB SERVER OF SERVER SYSTEM

104 — SERVER SYSTEM PROCESSES REQUEST TO GENERATE
APPROPRIATE FRAMESET ASSOCIATED WITH WEB PAGE

106 — WEB SERVER COMMUNICATES FRAMESET TO WEB BROWSER
OF CLIENT SYSTEM AS RESPONSE TO REQUEST

108 — FRAMES LOADED IN WEB BROWSER

110 — CODE IN DIALOG FRAME CALLS FUNCTION IN API FRAME
TO DETERMINE CONFIGURATION CHOICES FOR WHICH
GUI ELEMENTS NEED TO BE DISPLAYED

112 — CALLED FUNCTION ACCESSES CONFIGURATION DATA IN API
FRAME AND DETERMINES CONFIGURATION CHOICES

114 — CALLED FUNCTION MAKES CALLBACK TO CODE IN
DIALOG FRAME REQUESTING THAT GUI ELEMENTS
BE DRAWN FOR CONFIGURATION CHOICES

116 — CODE IN DIALOG FRAME DETERMINES HOW GUI
ELEMENTS ARE TO BE DRAWN ACCORDING TO
PARAMETERS IN DIALOG FRAME

118 — CODE IN DIALOG FRAME DRAWS
APPROPRIATE GUI ELEMENTS

120 — CODE IN DIALOG FRAME CALLS FUNCTION(S) IN API FRAME
TO CREATE CONNECTORS FOR TARGET GUI ELEMENTS

122 — CALLED FUNCTION(S) CREATE CONNECTORS IN API FRAME

A

TO FIG. 4B

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FROM FIG. 4A

FIG. 4B

A

124 — DURING CONFIGURATION WORKFLOW, USER MAKES CONFIGURATION SELECTION ASSOCIATED WITH GUI ELEMENT

126 — CODE IN DIALOG FRAME ASSOCIATED WITH GUI ELEMENT CALLS FUNCTION IN API FRAME, INDICATING SELECTION

128 — CALLED FUNCTION INSERTS REPRESENTATION OF SELECTION INTO DATA FRAME

130 — DATA FRAME POSTS REQUEST TO WEB SERVER OF SERVER SYSTEM

132 — SERVER SYSTEM PROCESSES REQUEST TO RETRIEVE CONFIGURATION DATA REFLECTING UPDATED CONFIGURATION STATE

134 — WEB SERVER POSTS RESPONSE TO DATA FRAME AT CLIENT SYSTEM

136 — CODE IN DATA FRAME CALLS FUNCTION IN API FRAME TO PROCESS RETURNED CONFIGURATION DATA

138 — CALLED FUNCTION STORES CONFIGURATION DATA IN API FRAME TO UPDATE CONFIGURATION STATE ON CLIENT SIDE

140 — CALLED FUNCTION DETERMINES CONFIGURATION CHOICES FOR WHICH GUI ELEMENTS NEED UPDATING

142 — CALLED FUNCTION USES CONNECTORS FOR APPROPRIATE CONFIGURATION ELEMENTS TO UPDATE CORRESPONDING TARGET GUI ELEMENTS

CONFIGURATION WORKFLOW COMPLETED ? — NO

144

YES

END